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Simulation Of Direct Chill Casting Under The Influence Of A Low-Frequency Electromagnetic Field

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**Highlights**

- A model for the simulation of low-frequency direct chill casting is presented.
- An R-adaptive diffuse-approximate method is used.
- Coupled transport and the electromagnetic equations are solved.
- The effect of an electromagnetic field on the axisymmetric billet is investigated.
- The Lorentz force and inflow geometry have a decisive effect on the flow structure and solidification.

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